

ABSTRACT OF THE DISCLOSURE

The number of measurements needed to calibrate an electrical device is reduced. Apparatus and methods minimize output of one or more unwanted signals by determining a calibration setting, in a minimal number of measurements, from determined distances to a best setting. Each distance to a best setting can be determined as a function of the characteristic of the unwanted signal and the measured unwanted signal level. A calibration setting point can be determined by searching for a setting point having a lowest sum of distance errors determined from the calculated distances and from the measured and non measured setting points. The techniques and apparatus are useful for minimizing a number of measurements that would be needed for determining a setting that substantially prevents generation of unwanted output signals, such as carrier leakage (LO-leakage) and unwanted sidebands, and for quickly determining whether an acceptable calibration setting exists for a device.